

Patent claims

1. A method for recirculating a partial exhaust gas flow to an internal combustion engine (1) of a motor vehicle, in which the partial flow is guided through a partial flow line (2) connected downstream of the exhaust gas outlet (1a) of the internal combustion engine (1), and is immediately thereafter supplied to the internal combustion engine (1) either via a first valve (3), a bypass line (5) which is connected directly downstream and a recirculation line (7) or via a second valve (4), a radiator (6) which is connected directly downstream and a recirculation line (7), the first valve (3) and the second valve (4) being opened or closed as a function of the exhaust gas conditions, this being monitored by a sensor (8).
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2. The method as claimed in claim 1, in which the partial flow is guided through a valve unit (9) which comprises the first valve (3), the second valve (4) and the sensor (8).
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3. The method as claimed in claim 2, in which the partial flow downstream of the second valve (4) is guided through a radiator (6), arranged as the radiator which is connected downstream, having liquid coolant, the liquid coolant being guided both through the radiator (6) which is connected downstream and through the valve unit (9).
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4. A device for carrying out the method as claimed in one of claims 1 to 3, which comprises a partial flow line (2) which is connected to a first valve (3) and to a second valve (4), the first valve (3) being connected to a recirculation line (7) by means of a bypass line (5) and the second valve (4) being connected to a recirculation line (7) by means of a radiator (6) which is connected
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directly downstream, and a sensor (8) being arranged which monitors both the actuation of the first valve (3) and of the second valve (4) as a function of the exhaust gas conditions.

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5. The device as claimed in claim 4, in which a radiator having liquid coolant is arranged as the radiator (6) which is connected downstream.

10 6. The device as claimed in claim 4 or claim 5, in which a valve unit (9) is arranged which comprises the first valve (3), the second valve (4) and the sensor (8).

15 7. The device as claimed in claim 5 or claim 6, in which the radiator (6) which is connected downstream comprises a coolant inlet (10) and the valve unit (9) comprises a coolant outlet (11).